

WHAT IS CLAIMED IS:

1. A method for decomposing a perfluorocompound comprising bringing a gas flow containing a perfluorocompound containing only fluorine as a halogen, into contact with a catalyst comprising Ni, W and Al as catalytically active ingredients and comprising a mixed oxide or complex oxide of Ni and Al and a mixed oxide or complex oxide of Ni and W, in the presence of steam or a combination of steam and air at a temperature of 500 to 800°C to convert the fluorine in said perfluorocompound to hydrogen fluoride.
2. A method for decomposing a perfluorocompound according to claim 1, wherein said catalyst comprises Ni and Al in a mole ratio of 5/95 to 40/60 and contains W in a proportion of 0.1 to 10 wt% based on the total weight of said catalyst comprising a mixed oxide or complex oxide of Ni and Al.
3. A catalyst for decomposing a perfluorocompound containing only fluorine as a halogen by reacting it with steam or a combination of steam and oxygen, which comprises Ni, W and Al as catalytically active ingredients and comprises a mixed oxide or complex oxide of Ni and Al and a mixed oxide or complex oxide of Ni and W.
4. A catalyst for decomposing a perfluorocompound according to claim 3, wherein said catalyst comprises Ni and Al in a mole ratio of 5/95 to 40/60 and contains W in a proportion of 0.1 to 10 wt%

based on the total weight of said catalyst comprising a mixed oxide or complex oxide of Ni and Al.

5. A process for preparing a catalyst for decomposing a perfluorocompound which comprises adding an aqueous solution containing a material for nickel oxide to powder of a material for Al_2O_3 , calcining the resulting mixture, adding thereto an aqueous solution containing a material for tungsten, and then calcining the resulting mixture to obtain a catalyst comprising a mixed oxide or complex oxide of Ni and Al and a mixed oxide or complex oxide of Ni and W.

6. An apparatus for treating a perfluorocompound comprising a means for obtaining a gas flow by diluting a perfluorocompound with nitrogen or air; a means for adding steam to said gas flow; a reactor for bringing said gas flow containing the added steam into contact with a catalyst to decompose the perfluorocompound; a heating means for heating said catalyst comprising Ni, Al and W as catalytically active ingredients and comprising a mixed oxide or complex oxide of Ni and Al and a mixed oxide or complex oxide of Ni and W which has been packed in said reactor, to the decomposition temperature of the perfluorocompound; and an exhaust gas washing tank for bringing a gas containing decomposition products produced in said reactor into contact with water or an alkali to remove hydrogen fluoride from the gas.

7. An apparatus for treating an etching gas

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wherein an apparatus for treating a perfluorocompound according to claim 6 is set so as to succeed an etching apparatus for a semiconductor or liquid crystal, whereby the etching gas is treated.